

Product information

ASSISTIVetravel facilitates access to public transport for people with visual, hearing or mobility impairments

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The Future of Mobility

The inclusion of people with disabilities is a matter that concerns all of us. Impaired persons need support to be able to use public transport – from a wheelchair ramp to digital assistance. An instrument to provide digital help is INIT's travel assistance system, ASSISTIVetravel. With the help of a smartphone app users can receive adapted real-time information, use a text-to-speech-function, ask drivers whether wheelchair space is available and request further assistance. The system even transmits real-time information to hearing aids. The result is genuine inclusion by means of modern information technology.

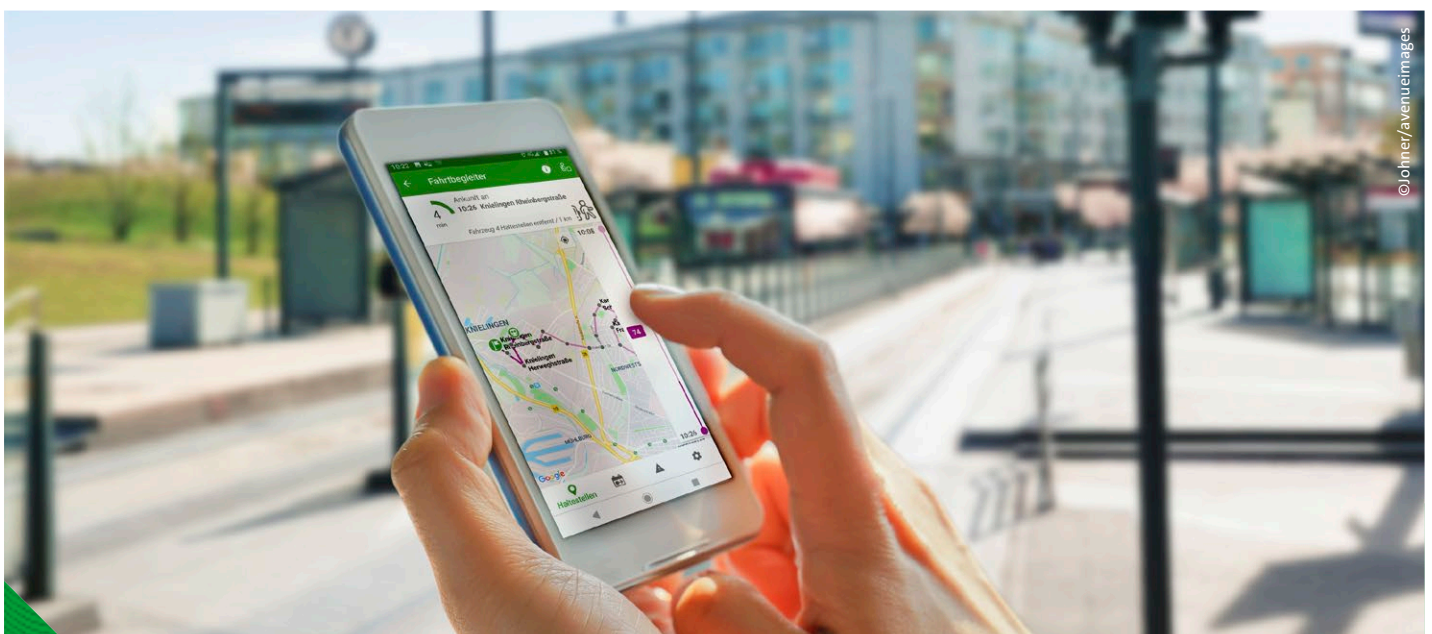
A building block for more accessibility in public transport.

Passenger information and inclusion

People with disabilities lead a harder life than others in many aspects – obviously using public transport shouldn't be more difficult for them. This is why many countries have launched specific programs to help impaired people in public transport. To name a few: The United Kingdom has the UK Inclusive Transport Strategy. The US Department of Transportation issued the Americans with Disabilities Act (ADA) Guidance. In Germany, the "Nahverkehrsplan" specifically demands complete barrier freedom in the passenger transport law to be achieved by 1 January 2022. Comparable programs exist in Northern and Southern Europe, New Zealand and all over the world. To gain accessibility, it is not enough to deploy low-floor vehicles or convert bus stops accordingly. In fact, "barrier-free" comprises the whole journey from A to Z – and this journey generally starts at home. Therefore, communication and information are of major importance.

Digital travel companion for disabled people

Today, passengers quite often plan their journeys with the help of electronic media. Modern apps display real-time departure times or indicate delays but they do not take into account the specific mobility demands of people with visual, hearing or mobility impairments. Yet a smartphone app that would be particularly helpful to them is one that does not only allow for barrier-free handling, but supports them with special functions and features. An app to provide all this is INIT's ASSISTIVetravel. The application assists users at all stages of their journey, provides real-time information about departure times and shows the vehicle's current position during the journey. Push notifications are sent shortly before the destination stop.



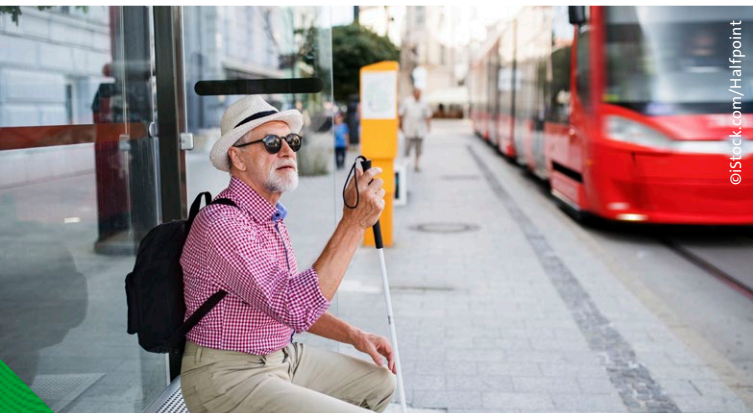
ASSISTIVetravel can be set up easily to reflect the user's specific restrictions. It is a digital travel companion that assists the users in every stage of their journey.

User-specific features

Each user creates a profile in which he/she defines the kind of his/her restrictions so that it is configured to that particular impairment. As a consequence, the app's user interface is adjusted. Passengers can use the app to register for a trip and will always be shown the current journey as well as receive real-time information and further specific support.

The app uses the augmented-reality function of the smartphone's camera. With it, the app determines the user's position and shows all stops in the proximity, their distance and direction as well as all the next departures at the chosen stop.

Passengers with visual impairments can skip the map design and the augmented-reality functions and rely on a simplified design with strong contrasts and text-to-speech navigation – this is an important characteristic providing a barrier-free experience. Even graphic elements like arrows or bars that depict the journey's progress are converted. While designing the app, particular emphasis was placed on accessibility. Therefore the app contains strong contrasts and forgoes pop-up windows. Furthermore, the app supports the operating aids of the phone's operating system, e.g. the zoom function and the screen reader. Visually impaired users receive acoustic signals to their scheduled and current trip. The app also triggers exterior announcements automatically (line and destination). So users can be sure to board the correct vehicle. Moreover, they can be certain they will not miss their alighting stop.



The app automatically triggers exterior announcements at the vehicles (line and destination).

Involving the drivers: a groundbreaking feature

Passengers in a wheelchair get information on whether there will be a wheelchair space for them in the next bus / the next tram. They learn in time when the vehicle approaches the alighting stop to have sufficient time to get off. Essential for this is the communication between the app and the public transport company's Intermodal Transport Control System (ITCS). The app transmits the user's request to the ASSISTIVetravel back end. From there it will be submitted to the ITCS. The back end's communication gateway to the ITCS is based on an open standard established by the Association of German Transport Companies (VDV 431, TRIAS). This is why ASSISTIVetravel may be integrated into both INIT's MOBILE-ITCS and other Intermodal Transport Control Systems easily and quickly.

The on-board computer provides the driver with the information on the driver's display before the boarding and alighting stops. He is notified before every stop whether mobility impaired passengers are waiting there to board. He also learns whether passengers in the vehicle want to alight. If needed, he can assist them in getting on or off the vehicle. He also can inform them whether the wheelchair spaces are available or occupied.

Hearing impaired passengers are given acoustic help in the vehicle. They receive information about the next stop directly via their hearing aid. All they need is a t-loop in their hearing device – nowadays a standard feature in hearing aids. Other technologies may be deployed as well.



ASSISTIVetravel enables passengers to ask the driver whether a wheelchair space in the vehicle is available.



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The driver is notified when passengers with mobility impairments want to board or alight the vehicle (bus cockpit during the Singapore test project).

Consequently, the app renders invaluable service to people with disabilities. It is their personalized digital travel companion.

Successful test project in Singapore

The travel assistance system successfully premiered as a test project in Singapore. The passengers can plan and take a trip with ASSISTIVetravel on a chosen bus line in a number of test vehicles. For the test project, the selected buses were equipped with INIT's COPILOTpc, the IT- and communication platform for vehicles, INIT's TOUCHmon, the mobile data terminal with touch screen, as well as internal and external loudspeakers and t-loop amplifiers. ASSISTIVetravel can also be used with other on-board hardware. The joint project of Singapore's Land Transport Authority LTA, SG Enable (a Singapore agency dedicated to enabling persons with disabilities) and INIT was called MAVIS (Mobility Assistance for Visually Impaired and Selected Users). It had been started to provide visually impaired, hearing impaired and mobility impaired passengers with passenger information tailored to their needs and turned out to be an overwhelming success.

Award-winning inclusion

Using the ASSISTIVetravel app as the centerpiece, MAVIS earned a lot of praise and won several awards: At UITP Global Public Transport Summit in Stockholm 2019 the project

UITP STOCKHOLM 2019 GLOBAL PUBLIC TRANSPORT SUMMIT

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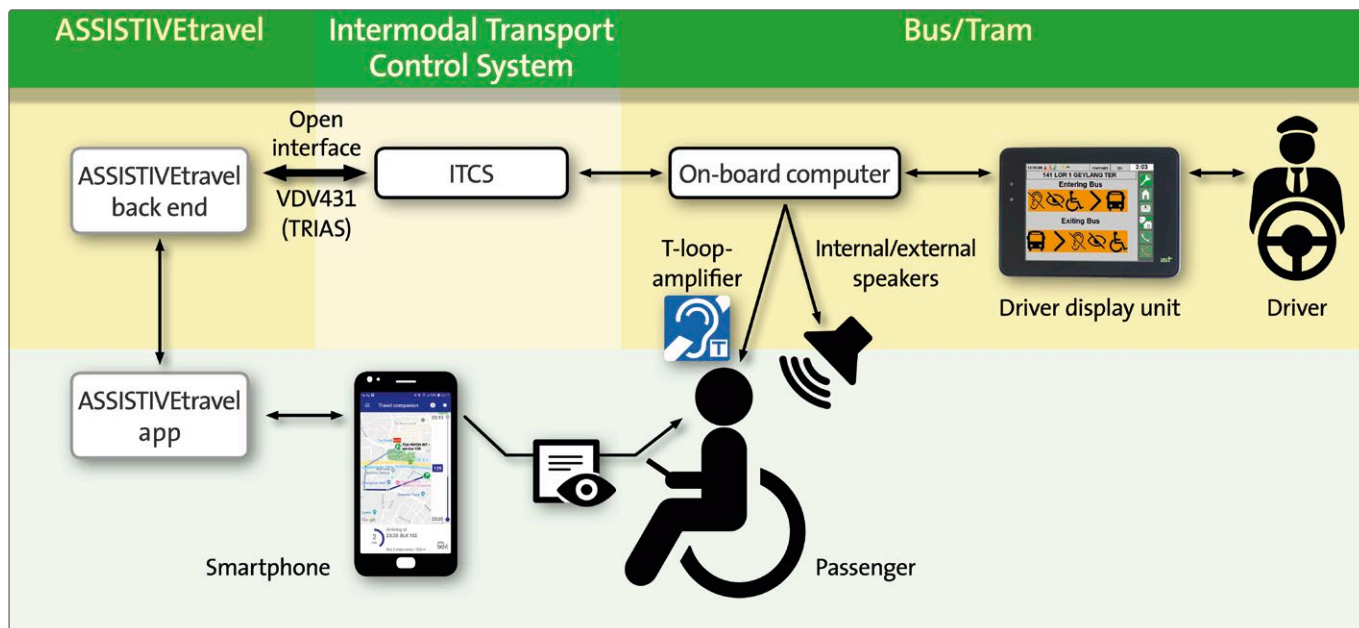
A test project that met with considerable success: MAVIS, using the ASSISTIVetravel app as the centerpiece, received both the UITP award in the category „Diversity and Inclusion“ and the UITP Asia Pacific Special Recognition Award. INIT Managing Director Klaus Janke, INIT Project Manager Dr. Roxana Hess, LTA-Chief Executive Ngien Hoon Ping and LTA-Deputy Chief Executive for Policy and Planning Jeremy Yap (from left to right) are celebrating the awards.

received both the UITP Award in the category “Diversity and Inclusion” and the UITP Asia Pacific Special Recognition Award. All functionalities described in this article were implemented in the test project.

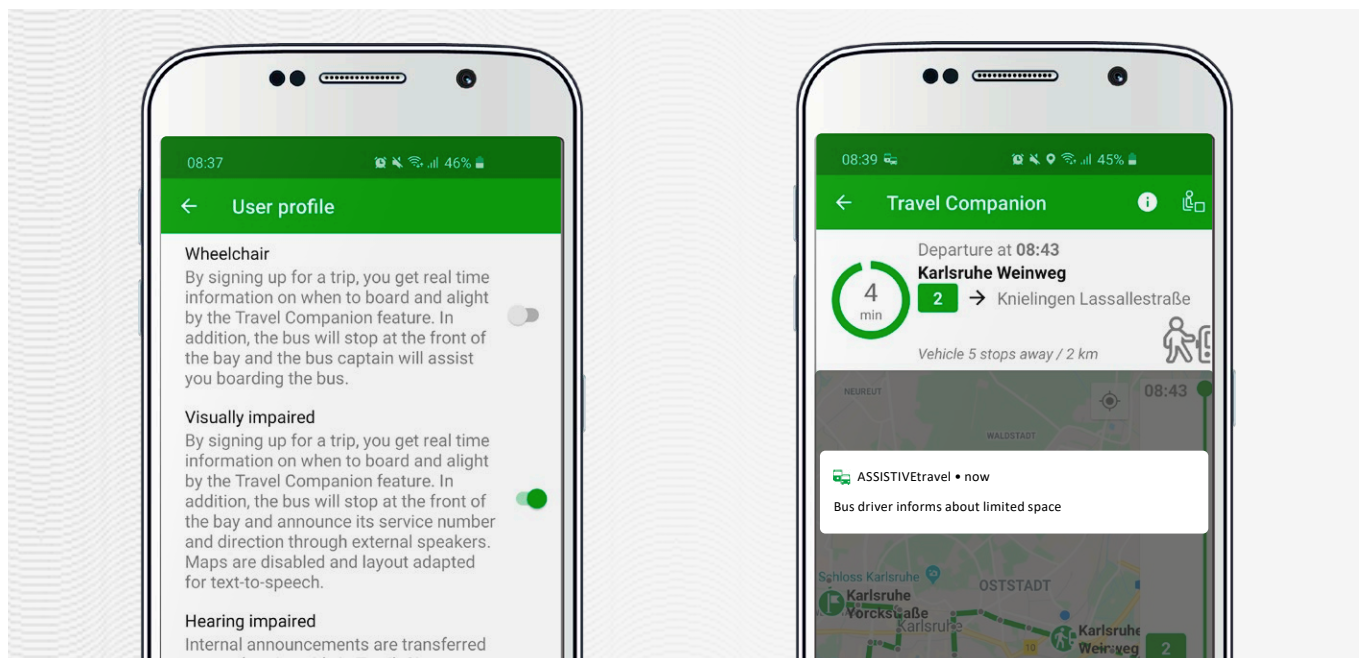
Flexible and universal

The ASSISTIVetravel back office system is adaptable to the requirements of public transport companies all over the world. Hence, ASSISTIVetravel forms the ideal basis for accessibility and barrier-freedom in public transport.

ASSISTIVetravel at a glance



Overview Interaction of ASSISTIVetravel app, ITCS and hardware.



User profile In the app, users choose the profile for their individual needs.

Passenger information A push notification informs mobility impaired passengers about available wheelchair space (demo screen).

If you would like to know more about ASSISTIVEtravel, please contact us at sales@initse.com. We look forward to hearing from you.

More than 1,100 transport providers worldwide rely on our integrated solutions to support them with their daily tasks

- ◆ Planning & Dispatching*
- ◆ Ticketing & Fare Management*
- ◆ Operations Control & Real-Time Passenger Information*
- ◆ Analyzing & Optimizing*

Moreover, transport companies can also master all requirements of electromobility and set up a single sign-on mobility platform using our integrated solutions. A robust package of operational services completes the INIT offer.

INIT is the worldwide leading supplier of integrated planning, dispatching, telematics and ticketing systems for buses and trains. For 40 years, INIT has been assisting transport companies in making public transport more attractive, reliable and more efficient.

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